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10/718,354	11/20/2003	Tor Schoenmeyr	S006-7000US0	9874

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EXAMINER

CARDENAS NAVIA, JAIME F

ART UNIT	PAPER NUMBER
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3623

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/718,354	Applicant(s) SCHOENMEYR, TOR	
	Examiner Jaime F. Cardenas-Navia	Art Unit 3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>January 7, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Introduction

1. This **NON-FINAL** office action is in response to applicant's submission filed on November 20, 2003. Currently, claims 1-24 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on January 7, 2004 has been considered by the examiner.

Drawings

3. **The drawings are objected to** because of the following informalities:

Regarding Fig. 4A, the graph lacks a descriptive title, a legend, and examiner believes that the x-axis label is misleading if not incorrect (see objection to specification for more details).

Regarding Figure 4B, the graph lacks a descriptive title and a legend.

Regarding Figure 5E, the graph lacks a descriptive title, and due to the black and white printing, is difficult to examine.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. **The disclosure is objected to** because of the following informalities:

The description of Figure 4A (par. 47, section (e)) is confusing and contradictory. Lines 10-11 state "For example, while three products are being sold, the best two products have a performance of 22,000." This is contradictory to the second bar being defined as the performance of the best two products, as the second bar clearly does not have a performance of 22,000. The next sentence of the description states "However, if one product is removed, thus leaving only the two best products, the projected performance is higher than the current performance." Examiner does not see this scenario shown anywhere, and does not know what "the projected performance" and "the current performance" are. Additionally, the purpose of the three curves, how they were plotted, and how they relate to the bars is unclear. As a result, Figure 4A has aided the examiner minimally in understanding the invention.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. **Claims 23 and 24 are rejected** under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

No method is disclosed in the specification for identifying which products customers sometimes, always, and do not substitute for each other.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 2-4, 7-12, and 14-24 are rejected** under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 2, 4, 14, 16, and 23, the terms "substitute," "substituted," "substitutability," and "substitutable" are indefinite because different customers substitute different products for each other. Identifying products that customers ***do not*** substitute for each other is indefinite for the same reason. For purposes of examination, all references to grouping products by substitutability have been interpreted as grouping products, no more.

Regarding claim 18, it is unclear how the performance measure that each product must meet can be the increase in category performance likely to be caused by adding that product to

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its category, as the increase in category performance would depend on the products already in the category, and on the products already in other categories since the retailer has limited space.

Additionally, the idea of meeting the increase in category performance likely to be caused by *adding* that product is contradictory to the fact that iteratively increasing the performance measure would result in products being *removed*. More detail is needed as to how this iterative process is executed. For purposes of examination, claim 18 has been interpreted as following:

The computer readable media of claim 15, wherein the computer executable program instructions for improving the retailer's total performance, when executed, direct the computer system to maximize total retailer performance across all categories while ensuring that the total number of products across all categories is not greater than the total number of products the retailer can carry.

Claim Rejections - 35 USC § 101

10. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. **Claims 23 and 24 are rejected** under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The steps of grouping products may be interpreted as no more than the manipulation of an abstract idea. The Supreme Court has specifically identified abstract ideas as a category of nonstatutory subject matter. Even so, the claimed invention may qualify as statutory subject matter if it provides a practical application, through either a physical transformation or by producing a useful, concrete, and tangible result. Applicant's claimed invention does not involve a physical transformation, so it must produce a useful, concrete, and tangible result. In order to qualify as useful, the claimed invention as a whole must produce a specific, substantial, and credible utility. The claimed invention does not produce a specific utility, as the term "substitute" is vague and indefinite and the steps of grouping may take place in a person's head or in a computer. The claimed invention is neither substantial nor credible for the same reasons. The claimed invention does not produce a concrete result because different customers will substitute different products for one another and so the steps of grouping could easily result in different groups. The claimed invention is not tangible because there is no "real world" result. That is, there is no connection between grouping products and a beneficial result or effect in the real world. Claim 24 appears to produce a tangible result by ordering products according to their performance, as there is inherent usefulness to the real world by doing so.

See MPEP 2106 IV.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. **Claims 1-5, 7-17, and 19-24 are rejected** under 35 U.S.C. 102(b) as being anticipated by Usrey (US 6,366,890).

Regarding claim 1, Usrey teaches a method for improving a retailer's total performance of a product assortment (col. 4, lines 37-40, col. 6, lines 57-60), comprising:

(a) categorizing the product assortment into a plurality of categories (col. 3, lines 23-36);

(b) calculating a performance function for at least one category that describes the relationship between the number of products in the category and the performance of that category (col. 3, lines 44-67, col. 4, lines 1-11, col. 12, lines 30-42), wherein the performance function predicts the effect of removing or adding category products on performance of the category (col. 4, lines 37-52); and

(c) improving the retailer's total performance by determining the number of products to sell in each category based on the performance function for each category (col. 4, lines 37-52).

Regarding claim 2, Usrey teaches wherein the step of categorizing the product assortment comprises categorizing the product assortment according to substitutability (col. 3, lines 29-36, col. 16, lines 46-55).

Regarding claim 3, Usrey teaches ordering the products in each category according to performance (col. 11, lines 41-54, Fig. 14, 15).

Regarding claim 4, Usrey teaches wherein products that are always or sometimes substituted for each other are placed in the same category (col. 3, lines 29-36, col. 16, lines 46-55).

Regarding claim 5, Usrey teaches wherein performance is defined as revenue, profit or number of units sold (col. 12, lines 43-51, percent market demand contains revenue, col. 4, lines 22-36, velocity class is number of units sold per week, col. 15, lines 6-9, Fig. 27).

Regarding claim 7, Usrey teaches wherein the step of improving the retailer's total performance comprises determining the number of products in each category whose addition to the category meets a performance measure (col. 4, lines 37-52, col. 15, lines 45-52, col. 16, lines 46-48, for the scenario generator, the implied performance measure being met is a net increase in total revenue for the category).

Regarding claim 8, Usrey teaches wherein the step of improving the retailer's total performance comprises finding the number of products in each category which generates an optimized sum of performance for all categories (col. 4, lines 37-40, 62-66, col. 5, lines 1-5, col. 15, lines 45-52).

Regarding claim 9, Usrey teaches wherein at least one performance function is calculated based on the retailer's performance data and product assortment (col. 3, lines 44-67, col. 4, lines 1-36, col. 12, lines 30-55).

Regarding claim 10, Usrey teaches wherein at least one performance function is calculated based on data from different time periods (col. 4, lines 22-36).

Regarding claim 11, Usrey teaches wherein at least one performance function has a diminishing performance for each additional product added (col. 1, lines 45-60, col. 16, lines 46-62).

Regarding claim 12, Usrey teaches wherein each performance function shows a performance value of zero when zero products are sold (col. 12, lines 44-55, it is inherent that revenue, and therefore product market demand, are zero when sales are zero).

Regarding claims 13-17 and 19-22, they are rejected using the same art and rationale used above for rejecting claims 1-4, 7, and 9-12, respectively. This is because claims 13-17 and 19-22 claim a computer readable media performing the method of claims 1-4, 7, and 9-12, respectively.

Regarding claim 23, Usrey teaches a method of categorizing products in a product assortment, comprising:

(a) grouping products that customers do not substitute for each other into different categories (col. 3, lines 29-36, products not grouped together are inherently in different groups); and

(b) grouping products that customers sometimes or always substitute for each other in the same category (col. 3, lines 29-36, col. 16, lines 46-55).

Regarding claim 24, Usrey teaches ordering the products in each of said categories according to the order of their performance (col. 11, lines 41-54, Fig. 14, 15).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. **Claims 6 and 18 are rejected** under 35 U.S.C. 103(a) as being unpatentable over Usrey (US 6,366,890), as applied to claims 13-15, in view of Kane et al. (US 2003/0014291 A1).

Regarding claim 6, Usrey does not expressly teach wherein performance is defined as revenue divided by product size, profit divided by product size, or number of units sold divided by product size.

Kane teaches wherein performance is defined as revenue divided by product size, profit divided by product size, or number of units sold divided by product size (par. 9, sales for a given product shelf space is sales divided by product size).

The inventions of Usrey and Kane pertain to optimizing the assortment of products for retailers. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, as Kane does not teach away from or contradict Usrey, but rather, teaches a function that was not addressed. The claimed invention is merely a combination of old and well-known elements, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus, it would have been obvious to combine the teachings, motivated by the old and well-known need of maximizing profits of a retailer with limited shelf space.

Regarding claim 18, Usrey does not expressly teach wherein the computer executable program instructions for improving the retailer's total performance, when executed, direct the computer system to maximize total retailer performance across all categories while ensuring that the total number of products across all categories is not greater than the total number of products the retailer can carry.

Kane teaches wherein the computer executable program instructions for improving the retailer's total performance, when executed, direct the computer system to maximize total retailer performance across all categories while ensuring that the total number of products across all categories is not greater than the total number of products the retailer can carry (par. 31, 32, hierarchies containing product categories, par. 27, factors that can be constrained, par. 35-38, objective function can maximize total profits while constraining total shelf space to less than or equal to retailer's total shelf space).

The inventions of Usrey and Kane pertain to optimizing the assortment of products for retailers. All the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, as Kane does not teach away from or contradict Usrey, but rather, teaches a function that was not addressed. The claimed invention is merely a combination of old and well-known elements, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus, it would have been obvious to combine the teachings, motivated by the old and well-known need of maximizing profits of a retailer with limited shelf space.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tenma et al. (US 4,947,322) teaches improving sales by adding or removing goods to a store layout.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaime F. Cardenas-Navia whose telephone number is (571)270-1525. The examiner can normally be reached on Mon-Thur, 9:30AM - 8:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Beth Van Doren can be reached at (571) 272-6737. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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April 2, 2008

/J. C./
Examiner, Art Unit 3623

/Andre Boyce/
Primary Examiner, Art Unit 3623